

**Engineers Australia  
Engineering Heritage Victoria**

**Nomination for an Engineering Heritage Marker  
under the  
Engineering Heritage Australia Heritage Recognition Program  
for the**

# **PORT of SALE and the SALE NAVIGATION CANAL**



**October 2009**

### **Caption for Cover Photograph**

The photograph is a reproduction from a postcard showing the paddle steamer *PS Dargo* moored at a wharf in the Swinging Basin at the Port of Sale. The date is not recorded. The postcard is apparently based on a hand-tinted black and white photograph.

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## Heritage Award Nomination Form

The Administrator  
Engineering Heritage Australia  
Engineers Australia  
Engineering House  
11 National Circuit  
BARTON ACT 2600

**Name of work:** Port of Sale and the Sale Navigation Canal

The above-mentioned work is nominated to be awarded an Engineering Heritage Marker.

**Location, including address and map grid reference if a fixed work:** The Port of Sale is located to the south of the town centre and is bounded by Canal Road and Punt Lane. The Sale Canal runs roughly north-south between the Port of Sale and the confluence of the Thompson and Latrobe Rivers approximately 5 km south of Sale and near the location of the Sale Swing Bridge.

**Centre of Swinging Basin at Port of Sale:** 38°06'47.93" S 147°03'49.19" E

**Confluence of Latrobe and Thompson Rivers:** 38°08'45.32" S 147°05'10.3" E

**Owner (name & address):** Wellington Shire Council, 70 Foster Street, Sale, Victoria 3850, PO Box 506, Sale.

The owner has been advised of this nomination and a letter of agreement is attached.

To be attached

**Access to site:** From Canal Road and Punt Lane and the South Gippsland Highway (A440).

**Nominating Body:** Engineering Heritage Victoria

David Beauchamp  
Chair  
Engineering Heritage Victoria  
15 October 2009

## Heritage Assessment

### 1 BASIC DATA

**1.1 Item Name:** Port of Sale and the Sale Navigation Canal

**1.2 Other/Former Names:** None

**1.3 Location:** The Port of Sale is located to the south of the town centre and is bounded by Canal Road and Punt Lane. The Sale Canal runs roughly north-south between the Port of Sale and the confluence of the Thompson and Latrobe Rivers approximately 5 km south of Sale and near the location of the Sale Swing Bridge.

#### Note about extent of Canal

The total length of the canal from the Swing Bridge to the Swinging Basin is about 5 km. However some descriptions talk of a length of 2.4 km or thereabouts. The difference relates to the extent of work carried out to convert the original course of the Thompson River to the canal. The northern end of the canal was excavated through a low-lying area of land known as McArdle's Gap. The next section of the canal used parts of the existing river course but several "loops" were removed from the river course. Further south again the course of the river does not appear to have been changed at all. The author believes that these differing methods of constructing the canal are the cause of the different descriptions of its length. The more northerly sections, amounting to about 2.4 km were the areas where substantial excavations occurred.

#### Grid References

Centre of Swinging Basin at Port of Sale:

38°06'47.93" S 147°03'49.19" E

GDA Zone 55: 505580.908 Easting, 14218389.467 Northing

Confluence of Latrobe and Thompson Rivers:

38°08'45.32" S 147°05'10.3" E

GDA Zone 55: 507552.623 Easting, 14222009.104 Northing

**1.4 Address:** See above

**1.5 Suburb/Nearest Town:** Sale

**1.6 State:** Victoria

**1.7 Local Govt. Area:** Wellington Shire Council

**1.8 Owner:** Wellington Shire Council

**1.9 Current Use:**

Port of Sale – Port facilities for Sale – primarily pleasure and fishing craft

Sale Canal – access to Port of Sale from the Latrobe River, Lake Wellington and the other Gippsland Lakes.

**1.10 Former Use:** None

**1.11 Designer:** Public Works Department Victoria, review by Sir John Coode.

**1.12 Maker/Builder:** The work was awarded in three contracts primarily to T G Mattinson.

**1.13 Year Started:** 1886

#### **1.14 Year Completed: 1890**

**1.15 Physical Description:** The Port of Sale consists of a series of wharfs and jetties surrounding a large Swinging Basin. The Swinging Basin was described as being 500 feet (152 metres) long, 300 feet (91 metres) wide and 17 feet (5.2 metres) deep in 1890. The Swinging Basin was excavated in a low-lying swampy area and the material excavated was used to raise the level of the surrounding land for commercial activities. Other services are also provided.

The Sale Navigation Canal connects the Swinging Basin to the Latrobe River approximately 5 km south of the Port. The canal was partly formed by increasing the cross section of the Thompson River and partly excavated between Flooding Creek (Sale) and the Thompson River through a section of old billabong known as McArdeell's Gap.

The Sale Navigation Canal is the longest navigation canal in Australia.

**1.16 Physical Condition:** The Port of Sale has been redeveloped with the expenditure of \$2.5 million with the work completed in 2004. The Sale Canal is fully serviceable. The Sale Swing Bridge has been restored and can be opened to allow the passage of craft between Sale and Lake Wellington.

**1.17 Modifications and Dates:** The Port of Sale was redeveloped recently (as detailed above) but used the original extent of the Swinging Basin. The Sale Canal remains largely as it was constructed in 1890.

#### **1.18 Historical Notes:**

##### Early Discovery

Early explorers in Gippsland occurred quite late and not much before significant development occurred. The two primary explorers in the Sale area (traversing some of the land almost simultaneously) were Angus McMillan and Paul Edmund Strzelecki.

In January 1840 Angus McMillan set out from Omeo down the Tambo River and reached, and named, Lake Victoria, into which the Tambo flows. He then pushed west crossing the Nicholson and Mitchell Rivers and discovering Lake Wellington. He reached the McAlister River which was too difficult to cross and returned to Ensay, 50 miles south of Omeo on the Tambo River. Later he returned and eventually reached the south coast in the vicinity of Corner Inlet. His journeys helped to establish the north-south corridor between Port Albert and Omeo which was to be so important in the early development of Gippsland.

Strzelecki had crossed over from NSW and came down the Tambo River from the vicinity of Omeo. He reached the Gippsland Lakes and worked his way around them to the west. In April 1840 he reached a large river which he named the Maconochie River but which we now know as the Thompson River. He found this river difficult to cross and took two days to find a crossing place. After a further 14 miles Strzelecki came to another substantial river which we now know as the Latrobe. After crossing the Latrobe he continued west, passing to the south the present site of Traralgon and crossed the ranges which are now known as the Strzelecki Ranges. His objective was Corner Inlet near Wilsons Promontory but he eventually reached Westernport Bay and completed his journey at Melbourne. Strzelecki was the first to cross Gippsland from the Gippsland Lakes to Western Port Bay and his journey opened up Gippsland for settlers.

##### Gippsland Transport Networks

After the discoveries of McMillan and Strzelecki the transport networks of Gippsland remained on the north-south axis they had blazed connecting Port Albert with Sale and Omeo. Roads were built along this axis which passed through fine grazing country well watered by the many rivers which traversed it. There was no proper road to Melbourne and the swamps in the Koo Wee Rup area to the north of Westernport Bay made a Sale to Melbourne road problematic.

A historian of the era described the Melbourne to Sale road in these terms: 'There was no road on earth like the Gippsland road'<sup>1</sup>

In July 1846 Tyers advised Governor Latrobe of the need for a road between Melbourne and Sale and asked for permission to proceed. A survey was carried out in March 1847. However this road took many years to build so that the establishment of an alternative east-west transport corridor through Gippsland did not immediately become viable.<sup>2</sup>

In 1854 Charles Marshall and Thomas Chapman brought a whaleboat from Tasmania and explored the Gippsland Lakes with a view to opening them up to commercial shipping. In 1858 Malcolm Campbell brought his schooner *Georgina Star* through the entrance to the Gippsland Lakes and some distance up the Tambo River to deliver supplies for Omeo. In 1860 a wharf was established below the confluence of the Thompson and Latrobe Rivers and also below the fixed bridge near the site where the Sale Swing Bridge is now located. This was known as Latrobe Wharf.<sup>3</sup>

Gold was discovered at Walhalla in 1863 and a gold rush ensued. Delivery of supplies and shipment of gold from Walhalla could use one of three routes.

- By road to the west to Melbourne despite the poor quality of the road at that time.
- By road to Sale and then by coastal steamer through the Gippsland Lakes and around the coast to Melbourne.
- By road via Sale to Port Albert and then by coastal steamer to Melbourne.<sup>4</sup>

None of these routes was ideal but at that time road transport was slow and difficult even where a reasonable road existed so the sea route from Sale and through the Lakes to Bass Strait remained the most attractive.

#### Integrated Gippsland Transport Plan

During the period 1860 to 1880 debate continued about the viability of the three competing routes. A north-south rail link between Port Albert and Sale, the opening up of the Entrance to the Gippsland Lakes and the building of a Melbourne to Sale railway were all considered.<sup>5</sup>

In the early 1870s the concept of an integrated transportation system for the area became more focussed. At that time the proposal called for:

- A Melbourne-Sale railway line.
- Construction of a canal between the Latrobe Wharf and Sale.
- Construction of the Port of Sale.
- Building of an opening bridge to carry the Sale to Port Albert Road at the confluence of the Thompson and Latrobe Rivers whilst also allowing for river traffic.
- Construction of a permanent, navigable entrance to the lakes at Lakes Entrance.

The implementation of this strategy would make Sale the transport hub of Gippsland.

The first element of this plan to be approved was the Melbourne to Sale railway in 1873.

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<sup>1</sup> Serle, *The Rush to be Rich* page 59, date unknown.

<sup>2</sup> Alan Lewis, Review of Construction Activities on West Bank of the Sale Swing Basin prior to 1<sup>st</sup> January 1994 in the context of Extinguishment of Native Title, August 2009, page 5.

<sup>3</sup> Ibid, page 5.

<sup>4</sup> Ibid, page 5.

<sup>5</sup> Ibid, page 5

The Public Works Department under Sir John Coode investigated two major options for the Port of Sale. One involved the Western Lagoon as the location of a swinging basin with the canal passing through McArdell's Gap to the Thompson River. The other placed the swinging basin in the Eastern Lagoon with the canal running south to join the Latrobe River near the Latrobe Wharf. Coode reviewed these plans and decided in 1880 in favour of the Western Lagoon and the canal route we see today.

It was proposed to raise the land around the swinging basin 5 feet above river flood levels to allow for commercial development around the basin. Some 300,000 cubic yards of material were to be removed from the swinging basin alone and redistributed on adjacent land.

In 1884 Alfred Deakin, Commissioner of Public Works (later Prime Minister) stated that the construction of the Sale Canal was "a national work of great importance to the eastern portion of the colony". In October 1885 the government approved the construction of the Sale Canal and fully funded the scheme. There is no evidence of private funding having been used in the project.

The Public Works Department was responsible for the design, letting of contracts and supervision of the work in three stages.

#### Construction of the Port of Sale and the Sale Canal

The work was awarded in three contracts:

- Stage 1 – From McArdell's Gap for 2500 feet (762 metres) south taking out two bends in the Thompson River – the contract was let to T G Mattinson for £4387 in January 1886.
- Stage 2 – From McArdell's Gap north to Flooding Creek (Sale) – the contract was let to T G Mattinson.
- Stage 3 – Swinging Basin and associated works – the contract was let to – T G Mattinson and Monie.

The work proceeded between 1886 and 1890. At first the work was done by the then conventional methods using men with picks and shovels assisted by horses and limited horse drawn machinery. However at the time of this work mechanisation of large scale civil work was developing. Steam power was making its presence felt in this type of work and Chesney's patent automatic earth scoop and William Forbes' traction engine were used<sup>6</sup>. It was soon found that this type of mechanisation made much larger civil works feasible and the days of huge numbers of navvies working with their hands were almost over.

#### Other Key Events in Gippsland Transportation.

The Melbourne to Sale Railway was completed in 1879 and the Sale Swing Bridge in 1883. Shipping could not reach Sale until the Swing Bridge was completed and the railway predated this by 4 years. This was a critical timing factor as the use of the railway was well entrenched by the time the Swing Bridge was completed. The railway had won the transportation race and coastal shipping in the Gippsland Lakes never recovered the lost ground.

There were, however, problems with the railway and they were not at the Sale end but at the Melbourne end. The Victorian Railways had struggled to find a route to Gippsland as there was a competitor in the form of the Melbourne and Hobson's Bay United Railway Company (M&HBURCo) which owned and operated the suburban railways to the east and south-east of Melbourne. Initial operations of the railway to Sale were limited to the eastern section of

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<sup>6</sup> Wellington Shire Council, 'History of the Port', [www.wellington.vic.gov.au](http://www.wellington.vic.gov.au), May 2008

the line, and later to Oakleigh, due to the blockage presented by the M&HBURCo. The impasse was not resolved until the Victorian Railways bought the M&HBURCo in 1879<sup>7</sup>.

Even then there was a further blockage in Melbourne. Melbourne had two ports – one at Port Melbourne on the eastern side of the Yarra River entrance and one at Williamstown on the western side of the Yarra River entrance. Originally separate railways had been built by private companies from the city to each port. The Victorian Railways subsequently bought the lines in the west in order to facilitate the construction of the Goldfields Railways to Ballarat and Bendigo (then called Sandhurst).

These railways had their Melbourne terminus at Spencer Street Station. The M&HBURCo had its Melbourne terminus at Flinders Street Station. Whilst these two stations were close to each other (1.5 km apart) there was no rail connection between them at the time of the construction of the line to Sale. This meant that goods handled by rail from and to the ports required transshipping by road between the two railheads if the ship involved happened to come into the less convenient port. This situation was remedied in December 1891 when the viaduct from Spencer Street to Flinders Street was completed<sup>8</sup>.

Because of road and railway problems to the west significant passenger and cargo traffic was carried through the Port of Sale:

- Inter-lake traffic, notably the steamers *Omeo* and *Dargo* carried passengers and cargo.
- Inter-colonial vessels transported coal from New South Wales to the Sale Gas Works.
- Schooners and steamers direct with Melbourne packed with merchandise for Sale and district store keepers and export of local products such as beer and cordials, fish for the Melbourne market and timber blocks for the Melbourne tramway companies were the main commodities carried.

Once the railway from Melbourne to Sale and Port of Sale were in operation there was some competition for cargo to and from Melbourne.

Coastal shipping subsequently declined in the 20<sup>th</sup> century for reasons that are more to do with policy than with efficiency.

The railway would remain the dominant form of transport until well into the 20<sup>th</sup> century when road transport took over from the railways, not due to its greater efficiency but primarily because the railways had to pay for their tracks whereas road transport enjoyed the provision of roads provided more or less free of charge out of the public purse.

### Years of Neglect

Use of the Port of Sale continued spasmodically from the early 20<sup>th</sup> century until 1938 when the post of Bridge Keeper at the Swing Bridge was abolished. This made it virtually impossible for larger vessels to get up to the Port of Sale.

The Port of Sale, the Sale Navigation Canal and the Swing Bridge fell into disuse and neglect. The Port of Sale and the Sale Navigation Canal gradually reverted to what looked like natural water courses.

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<sup>7</sup> Robert S Lee, *The Railways of Victoria 1854 – 2004*, Melbourne University Publishing, 2007, pages 77-79

<sup>8</sup> Ibid, page 85

The Swing Bridge reverted to a permanently closed road bridge and continued to carry the South Gippsland Highway whilst it gradually deteriorated. Fortunately it was well built of robust materials and remained very largely intact with minor repairs such as periodic replacement of the timber running surface.

### New Era of Gas Pipelines and Concrete Bridges

As the Sale area experienced a new boom period in the 1960's with the discovery of oil and gas in Bass Strait the old bridge was called upon to carry heavier and heavier loads. The first natural gas was delivered from the Longford plant in 1969.

When the Swing Bridge was built the heaviest traffic was in the form of bullock wagons but as the 20<sup>th</sup> century proceeded and road transport developed, the motor truck became ubiquitous. The development of the high speed diesel engine and the increasing demands on road transport with the demise of railway freight services led to an ongoing revolution in heavy road transport. The rigid two-axle trucks of the 1920's gave way to the semi-trailer which in turn gave way to the B-double. In parts of Australia (but not in Victoria) Road Trains 55 metres long are the standard means of heavy road haulage. All these vehicle types continue to grow in load-carrying capacity, speed and efficiency right up to the present time.

Trucks of increasing size used the Swing Bridge and the limitations of the old bridge finally led to the construction of a new high-level, high-capacity road bridge, completed in 2002. The new concrete bridge, sweeping high above the flood plain upstream from the Swing Bridge provided the needed load capacity for a modern highway and also provided a clear 6.5m clearance above the waters of the Thompson River, restoring access for sizeable river craft to the Port of Sale after obstruction of the canal by the closed bridge for over 65 years. This made the redevelopment of the Port of Sale feasible.

### Revival of Old Infrastructure

With the construction of the new South Gippsland Highway Bridge (2002) came the decision by VicRoads to restore the Swing Bridge and hand it over to the Wellington Shire Council. This work was completed in 2004.

Whilst this was happening the Wellington Shire Council obtained funds to redevelop the Port of Sale. It funded \$240,000, the Victorian State Government contributed \$1.96 million from the State Government Regional Infrastructure Development Fund, the Federal Government contributed \$200,000 from its Sustainable Regions Program and \$65,000 came from Gippsland Ports. The \$2.5 million project commenced in November 2003 and was completed in June 2004.

The work consisted of the following major components:

- Seventy metres of new retaining walls.
- Seventy metres of timber board walks and 280 metres of concrete paths to open up accessibility to the port area.
- Two new 5 metre long jetties to improve boat mooring capacity.
- New street lighting to add night time ambiance and safety to the precinct.
- New picnic facilities, toilet block and barbeque area.
- Landscaping improvements with additional garden beds and trees.
- Undergrounding of power lines.
- Improvements to access roads and upgraded parking facilities.
- New signage and flags lining the port to provide a colourful and exciting entry to the port.

Further plans for a second stage of work include such developments as:

- Increasing the marina capacity from 42 boats to 150 boats.
- Apartments and hotel accommodation adjacent to the port.
- Convention and retail facilities including ship chandlery, cafes, restaurants and a tavern.

#### Development of Trails between Port of Sale and the Swing Bridge

In parallel with the above works a project to develop a series of walking trails has been developed. A Heritage Trail will link the Port of Sale with the Swing Bridge whilst a Wetlands Trail will provide access to the Sale Common Wetlands to the east of the Sale Navigation Canal and to the wetlands around Lake Guthridge and Lake Guyatt closer to the city.

This project has been carried out in stages by the Rotary Club of Sale in association with the Wellington Shire Council and Parks Victoria. The Heritage Trail will be officially opened at a ceremony on 15 November 2009.

#### **1.19 Heritage Listings:**

- Victorian Heritage Register

Neither the Port of Sale nor the Sale Canal is registered.

- National Heritage List

Not listed

- Register of the National Estate

**Name: Sale Canal, South Gippsland Highway, Sale, Victoria, Australia**

**Class: Historic**

**Legal Status: Registered 30/06/1992**

**Place ID: 15407**

**Place File Number: 2/09/272/0005**

- National Trust of Australia (Victoria)

**Name: Sale Canal & Swing Bridge**

**File Number: B2694**

**Level: Local**

**Location: Sale**

#### **1.20 Associated Nomination**

The Sale Swing Bridge has been nominated for, and has received, an Engineering Heritage National Landmark award under the Engineering Heritage Australia Heritage Recognition Program.

It is planned to unveil the markers for the Port of Sale and the Sale Navigation Canal and the Sale Swing Bridge on the same day, 15 November 2009.

The two projects share strong linkages if for no other reason that the Swing Bridge is necessary to allow boats of any size to gain access to the Port of Sale from Lake Wellington.

## **2 ASSESSMENT OF SIGNIFICANCE**

### **2.1 Historical Significance:**

The Port of Sale and the Sale Navigation Canal held a central role in the Sale district from the time of its building until the early years of the 20<sup>th</sup> century. The East Gippsland area, of which Sale is generally regarded as the centre, has had a long history of being a transport hub and capital of East Gippsland. Original access to the area by Europeans was only via the sea primarily via Port Albert, 85 km south west of Sale by road. The Swing Bridge crossed the major river which stood in the way of this highway. However the Swing Bridge also gave access to the Port of Sale and the Sale Navigation Canal for shipping from the Gippsland Lakes.

In the early days there was pressure for support facilities in the area for timber getting, mining and a growing pastoral industry. Later an attempt was made to open a sea transport link to the outside world via the Gippsland Lakes to the Port of Sale at the western extremity of the lake system. However the entrance to the lakes at Lakes Entrance was treacherous and not suitable for commercial shipping of any size. As demands grew for the development of a port as close to Sale as possible, the bridge over the Latrobe River on the road between Sale and Port Albert stood in the way of river traffic heading for Sale. The construction of a swing bridge to replace the previous fixed low-level bridge became a matter of priority.

Once a railway link from Melbourne to Sale was established in 1879 the imperative for shipping links declined and eventually coastal shipping disappeared. Later a road link paralleled the rail link providing further options for transport between Melbourne and Sale.

The Port of Sale and the Sale Navigation Canal have been redeveloped in recent times (2004) with a stronger emphasis on the needs of pleasure craft. This is a strong factor in Sale's attempts to be the tourist centre for the Gippsland area.

Refer to Historical Notes above.

### **2.2 Historic Individuals or Association:**

#### **2.2.1 Angus McMillan:**

A Scottish immigrant born on the Isle of Skye, Angus McMillan was hailed in early Gippsland as the discoverer of the province through a series of expeditions between 1839 and 1841. In late January 1840 McMillan arrived at the confluence of the Latrobe and Thomson Rivers startling the local members of the Gúnnai-Kúrnai tribe, in possibly their first encounter with Europeans. McMillan had just led the first expedition of Europeans through the Gippsland Plains discovering luxuriant natural pastures for his employer, Lachlan Macalister. Unable to cross the Latrobe and lacking provisions, he returned to his base camp at Numbla-Munjee (Ensay). By February 1841 he had blazed a track from Omeo to Port Albert.

#### **2.2.2 Paul Edmund Strzelecki:**

Paul Strzelecki was born in the village of Gluzyma near Posnan, Poland in June 1797. At 14 he was sent to school in Warsaw but at the age of 16 he became involved with a married woman. After intervention by his elder sister he went into hiding until age 21. He left Gluzyma in 1819 at the age of 22 and secured a patron and employer – Prince Francis Sapieha who made him estate agent in charge of his large properties. Strzelecki apparently undertook this task with considerable vigour and, after four years, was challenged by the heir

to the family estate. The matter went to court and Strzelecki lost forcing him to leave the district in disgrace.

Strzelecki left Poland and went to England where he remained for nine years. What he did and how he supported himself whilst in England appears to be a mystery. There is some evidence that he travelled around England and Scotland extensively during this interlude.<sup>9</sup>

He left England in 1834 and travelled in the United States, Brazil Argentina, Chile, Mexico, Hawaii, the Marquises Islands, The Friendly Islands, Tahiti, New Zealand and finally to New South Wales, arriving in Sydney in April 1839.<sup>10</sup>

Strzelecki carried out one expedition in New South Wales in 1839, his primary objective being to look for interesting mineral prospects. This took him into the Blue Mountains around the Upper Grose Valley with its notoriously difficult terrain. However he found his way across and explored land beyond the mountains culminating in finding small traces of gold in the Fish River valley near Bathurst. Returning to Sydney he decided to carry out a further expedition to explore for minerals on the seaward side of the Great Dividing Range from the Snowy Mountains as far as Wilsons Promontory.<sup>11</sup>

The party consisted of James McArthur, James Riley and Strzelecki together with a servant and an Aborigine, Charlie Tarra. On 2 March 1840 the party set out from Ellerslie, bound for the south. The first stage of the journey was due south down the valley of the Murray to the foothills of the Alps. The party climbed the highest mountain in the range and Strzelecki named the mountain Mt Kosciuszko after a Polish patriot.<sup>12</sup>

On descending from Mt Kosciuszko, Strzelecki and his party travelled further south to the vicinity of Omeo where they climbed Mount Tambo. On 27 March 1840, he left the station at Numbla Munjee and proceeded south down the Tambo River reaching the Lake King, one of the Gippsland Lakes. Having no boat the party was unable to explore the lake and struck west finding further rivers entering the lake system. They reached the Thompson River in the vicinity of the present-day city of Sale. Strzelecki called this river the Maconochie and it took him two days to find a suitable place to cross it. Strzelecki seems to have crossed the Latrobe River, which he named, in the vicinity of Loy Yang. He was now only 40 miles from his objective, Corner Inlet, but ahead of him lay the range of steep hills which today bear his name. This challenge caused him to make the transition from fairly easy going to what he described as "utter exhaustion".<sup>13</sup>

Strzelecki changed his course towards Corinella on the eastern shore of Western Port Bay and struggled on through heavily timbered country. His party was short of food and their six exhausted horses were abandoned in the vicinity of the present day village of Boolarra. He eventually reached civilisation and ultimately arrived in Melbourne.

Strzelecki was the first to traverse the heart of Gippsland, now some of the finest dairy country in Australia. Settlers were looking for good land to open up and Gippsland now became their objective.

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<sup>9</sup> Geoffrey Rawson, *The Count*, William Heinemann, London, pages 3-12.

<sup>10</sup> *Ibid*, pages 13-47.

<sup>11</sup> *Ibid*, page 69

<sup>12</sup> *Ibid*, pages 69-79

<sup>13</sup> *Ibid*, pages 80-90

### 2.2.3 Sir John Coode

The following brief biography is taken from the Australian Dictionary of Biography.

“COODE, Sir JOHN (1816-1892), civil engineer, was born on 11 November 1816 at Bodmin, Cornwall, England, son of Charles Coode, solicitor, and his wife Anne, née Bennett. He was educated at Bodmin Grammar School and studied civil engineering under James Rendel (1799-1856) of Plymouth.

Coode's achievements justify the claim that he was probably the most distinguished harbour engineer of the nineteenth century. He was in charge of the Portland Harbour works in 1856-72 and made many reports on English harbours and rivers. The most famous colonial works for which he was responsible are the harbours of Table Bay and Colombo. In 1849 he was elected a member of the Institute of Civil Engineers and was president from May 1889 to May 1891. He was knighted in 1872 and appointed K.C.M.G. in 1886. He served on the International Commission of the Suez Canal in 1884-92. He was also an active member of the Royal Colonial Institute and chairman of the Colonial and Continental Church Society.

Coode first visited Australia in 1878, when he was brought out by the Melbourne Harbor Trust to report on works for improving the port. Large ocean-going ships had been prevented from approaching the city by the narrow and winding Yarra River and the inadequacy of the port facilities. Coode recommended improvement of the existing channel in preference to the direct canal advocated by many local authorities. The river was to be widened, deepened and made into a smooth curve by means of a canal through Fishermen's Bend. To accommodate the increasing port traffic he recommended the construction of docks. His plans were faulty in detail but his proposed river improvement and location of dock sites provided a satisfactory basis on which the modern port of Melbourne has been developed. Coode was then retained by the government to report on other harbours. At Portland his recommendation to build a breakwater of 3450 feet (1052 m) protecting several short shipping piers was considered too expensive and elaborate, and only a small, ineffective 'Fisherman's Breakwater' was constructed. A breakwater similar to Coode's proposal was finally built in 1960. At Geelong a bar running across the harbour mouth prevented large ships from entering: Coode's recommendation of 1879 of a direct channel cut through the bar was adopted by the government. His recommendations for Warrnambool and Port Fairy were also carried out. His Lakes Entrance plan brought Gippsland into direct communication with the sea by construction of a channel through the sand dunes between the lakes and the ocean. This work was completed in June 1889. In South Australia Coode reported on navigation of the Murray River mouth.

In 1885 Coode revisited Australia and examined harbours and river mouths from Fremantle round the southern and eastern coasts to the Gulf of Carpentaria. He reported from London in 1887-88 to the New South Wales government on the Clarence River, where he recommended the building of two moles or piers to act as breakwaters and training banks and the removal of the rocky reef across the entrance to provide a fixed navigable entrance and reduce damage from floods and tides. At Richmond River he recommended breakwaters and training banks to neutralize the shifting character of the river entrance. These two reports were put into effect and helped to develop the trade of rich agricultural hinterlands. At Lake Macquarie, to give better access to the collieries, Coode recommended improvement of the channel connecting the lake to the sea. In his Macleay River report he recommended two breakwaters and training banks to regulate the river entrance.

In 1887 Coode made two reports for the Queensland government; both were carried out. At Mackay he recommended extensive training banks and the dredging of a continuous deepwater channel from the entrance of the Pioneer River up to the town. For the port of

Townsville he proposed breakwaters and dredging operations. In the same year Coode made two reports for Western Australia. He chose a site for Fremantle Harbour and reported on harbour works, but the plan was rejected. At Geraldton he recommended a jetty with railways and warehouses to increase accommodation for loading and discharging ships. In South Australia, after personal inspection, he recommended an outer harbour for Port Adelaide.

Coode died at Brighton, England, on 2 March 1892. In 1842 he had married Jane Price and his son John followed his father by becoming a civil engineer. A portrait is at the Institution of Civil Engineers, London".<sup>14</sup>



Sir John Coode

#### 2.2.4 Alfred Deakin

The following are extracts from the Australian Dictionary of Biography.

"DEAKIN, ALFRED (1856-1919), barrister, journalist and prime minister, was born on 3 August 1856 at Collingwood, Melbourne, younger child of William Deakin of Towcester, Northamptonshire, England, and his wife Sarah, née Bill, of Llanarth, Cardiganshire, Wales".

"Alfred Deakin began his formal education aged 4 at a boarding school situated first at Kyneton and later at South Yarra. In 1864 he became a day-boy at the nearby Melbourne Church of England Grammar School. Already Deakin read avidly and day-dreamed habitually, practices which hampered his academic studies. He did not excel at games. Later he looked back upon his schooldays as a time of wasted opportunities. Nonetheless, he won a few subject prizes and survived happily enough to the upper school where he came under the influence of a young master, J. H. Thompson, and the school's renowned headmaster, Dr John Bromby, whose style of oratory, which Deakin's own later closely resembled, fascinated him. At last he was inspired to work seriously. He matriculated in 1871.

Deakin strayed into the study of law at the University of Melbourne. By evening he attended lectures, by day he earned pocket-money as a schoolteacher and private tutor. He spoke frequently at the University Debating Club. He gained further skill and experience in the

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<sup>14</sup> This extract is copied without change.

Eclectic Association of Victoria, where members aired current notions on a range of intellectual topics. He was prominent in the spiritualist movement, attending séances, testing phenomena, arranging lectures and conducting the Progressive Lyceum, the spiritualist Sunday school. In 1874 he edited and contributed to the *Lyceum Leader* and a year later his small volume *Quentin Massys: A Drama in Five Acts* appeared. In 1877 he published *A New Pilgrim's Progress*, a lengthy allegory imbued with the loftiest moral principles, and he became president of the Victorian Association of Spiritualists. He passed in 1877 the final examination for the certificate in law then required for admission to the Victorian Bar. He took chambers in Temple Court, where with little enthusiasm for law and no great expectations he wrote poetry, essays and literary criticism.

An introduction in May 1878 to David Syme of the *Melbourne Age* rescued the restless Deakin from his near-briefless career. Syme, who became a close friend, engaged him as a paid contributor of reviews, leaders, sub-leaders and general articles on politics, literature and miscellaneous topics. In 1880 he edited the *Leader*, the *Age's* weekly. He excelled at journalism, which became his major occupation for some five years and provided a useful source of income for most of his life. Syme also converted him from free trade beliefs to protectionist, a change which helped both his journalistic and political ambitions. Deakin's interest in Victorian politics had been aroused by the resignation of the liberal parliamentarian, George Higinbotham one of his boyhood heroes, the entry into parliament of Pearson, and the constitutional conflict which Deakin described in the memoir (1900) published in 1957 as *The Crisis in Victorian Politics, 1879-1881*. With Syme's aid he became the Liberal candidate for West Bourke, a largely rural electorate, which he won narrowly in February 1879.

The young Deakin who entered parliament was an impressive figure. He was six feet (about 183 cm) tall, dark haired and dark eyed, his handsome, alert face fashionably bearded. He spoke rapidly in a rich, baritone voice which, he claimed, bore no trace of 'provincial' accent. In his maiden speech he startled members by announcing his resignation because of doubts about the fairness of the administration of the original poll. He lost the recontested by-election in August and lost again in the general election of February 1880. In July he headed the poll in West Bourke after James Service, 'Conservative' leader, had secured a dissolution of parliament. Despite his youth and inexperience, and in the face of opposition from his own party and the *Age*, he was prominent in negotiating a compromise between moderates on both sides and helped to secure the Council Reform Act of 1881.

On 3 April 1882 Deakin married 19-year-old Elizabeth Martha Anne ('Pattie'), daughter of wealthy Hugh Junor Browne, a prominent spiritualist. The marriage, disapproved of by the Brownes, brought no material benefit to the Deakins. They lived for a time with Deakin's parents: in 1887 Llanarth, their house in Walsh Street, South Yarra, was completed. For the rest of his active life, Deakin walked, bicycled or took the tram into the city.

From March 1883 to November 1890 Deakin held office in coalition governments. He proved an able administrator, and he practised and polished the art of compromise. He introduced the Factories and Shops Act of 1885, a pioneer social measure based largely on British legislation that had impressed the royal commission of 1884. The Act, though mutilated by the Legislative Council, provided for the regulation and inspection of factories, enforced sanitary regulations, limited the hours of work of females and youths, and compensated workers for injury. He chaired the 1884 Royal Commission on irrigation, a cause he pressed with fervour. Late in the year he led a small party to California to investigate irrigation and conservation schemes. There he met the Chaffey brothers and reported enthusiastically on their experiments. The Chaffeyes came to Victoria in 1886 and demonstrated their methods at Mildura. In June Deakin introduced the first legislation in Australia to promote an irrigation system. The bill broke with traditional English riparian law by placing ownership of natural

waters under the Crown and provided for the construction of state-aided irrigation works by local trusts. Promise of early success faded because of technical problems, poor choice of associates by the Chaffey, the depression of the 1890s and one of the worst droughts in Australian history. But in the long run successful irrigation and water schemes became a feature of rural Victoria and Australia.

Late in 1885 Berry and Service retired and were succeeded, as leaders of the coalition, by Deakin and Duncan Gillies. Deakin, Chief Secretary, also took the portfolio of water-supply to which was added, in 1890, health and, briefly, solicitor-general. He was Victoria's principal representative at the Colonial Conference of 1887.

Melbourne at this time was indeed marvellous and a massive inflow of British capital fuelled the Victorian boom. The coalition won the election of March 1889, but problems over proposed railway construction and use of the militia to protect non-union labour in the maritime strike—an action for which Deakin bore ministerial responsibility—caused the government's defeat in October 1890. By then the land boom was starting to waver and soon the bubble burst. Deakin, like many contemporaries of his social class, speculated heavily in the rush to be rich: he lost his own and his father's savings. Unlike many he repaid his debts.

Outwardly, after the coalition's defeat and financial disaster, Deakin seemed his familiar confident self. Inwardly, as copious note-books and diaries reveal, he was disillusioned. Tortured by self-doubt, he longed to restore his self-respect. He spent the next ten years as an influential back-bencher, the member from 1889 for Essendon and Flemington. Syme urged him to replace Munro as premier, but he refused all offers of ministerial posts. He returned to the practice of law. He was engaged in several major cases.

Deakin's interest in Federation had been stimulated by Service and heightened by experience at the Colonial Conference of 1887, where colonial division thwarted attempts to overcome Imperial apathy".

Deakin's experience at the Colonial Conference in 1887 influenced him towards work strenuously towards an Australian Federation and he spent the decade of the 1890s pursuing this goal. He had a significant influence in the shaping of the Australian Constitution during this period. He was elected to the first Federal Parliament for the seat of Ballarat, which he won handsomely and retained until his retirement in 1913. He was Attorney General in the First Federal Government in 1901 and the youngest member of Cabinet.

He became Australia's second Prime Minister when Barton retired to the High Court in 1903. His second term as Prime Minister from 1905 to 1908 was particularly productive with many pieces of landmark legislation being passed. His third and last term as Prime Minister commenced in 1909. He retired from parliament in 1913.

"After 1916 he lived as a recluse, his memory decayed, the famed silver tongue stilled. He died of meningo-encephalitis on 7 October 1919, survived by his wife and daughters. As befitted this independent Australian Briton he was given a state funeral, his coffin draped with the Union Jack. He was buried in St Kilda cemetery.

His wife Pattie, who died on 30 December 1934, was well known for her work for children's welfare, particularly the kindergarten, crèche and playgrounds movements, and for servicemen during World War I. Ivy, the eldest daughter, married Herbert Brookes, Stella married Sir David Rivett and Vera Sir Thomas Walter White. Deakin's sister Kate (or Katie) died unmarried in 1937; a talented pianist, she shared and encouraged her brother's interest in literature and remained his lifelong mentor and confidante.

Alfred Deakin, dominant figure of the first decade of Federation, was a complex character, the outer man the generally charming, confident, intelligent politician, the inner man the often morose, insecure, frustrated intellectual. The young man attracted to spiritualism and theosophy wanted to be a philosopher, poet, dramatist: instead he merely became a statesman.

He was a gifted politician in an era that lent itself to his natural talents of compromise and persuasion. He had integrity, though he could play the opportunist when the need arose and the Fusion sullied his reputation for some. He was unusually modest and circumspect, declining all British offers of titles and distinctions in the belief that he had not earned them and that his independence might be compromised. In the late nineteenth century and early twentieth century he epitomized Victorian liberalism. His services to the Federation movement and the new nation were immense. The Commonwealth briefly gained recognition as a national laboratory for social experimentation and positive liberalism, and Deakin more than anyone brought that about. He was the embodiment of dual nationalism: pride in Australia went hand in hand with pride in Empire, membership of the A.N.A. with membership of the Imperial Federation League. He had a mystical faith in the virtues of the British Race and his vision was of a great white Australia living at one with and within a greater white Empire. The tragedy was that he became an anachronism. Liberalism blossomed and withered in his own time, and the middle ground disappeared beneath his feet. The sun was already setting on the Empire he envisaged".



The Honourable Alfred Deakin in 1901

## 2.3 Creative or Technical Achievement:

### Historical

The work involved in the construction of the Port of Sale and the Sale Navigation Canal was straight forward civil works involving excavation of existing waterways to provide deeper and wider structures and in part the excavation of new waterways (in the McArdell's Gap area). The work also involved the diversion of Flooding Creek to allow the works to proceed.

However the Port of Sale and the Sale Navigation Canal involved no locks, bridges or mechanical structures other than the Swing Bridge which is not regarded as being part of the Port of Sale and the Sale Navigation Canal for the purposes of this document.

The creative elements of the work stem from the fact that the project was carried out at the very time that machinery was beginning to take over from the navvy with pick and shovel. Some of this new machinery was used on the project and this represents a significant creative element, particularly as Sale was at the time a small country town a long way from centres of major technology development.

At this time the use of the horse to increase the "horsepower" available to large civil construction projects was making an impact. Chesney's Patent Automatic Earth Scoop was employed on the project<sup>15</sup>.

This device closely resembles what we would today call a "scraper". The developer of the device demonstrated a model which had a capacity of three quarters of a cubic yard (0.6 m<sup>3</sup>) and was pulled by two draft horses. This represented a huge improvement over the use of men with shovels and wheel barrows. It might sound like a small step to us today when we are familiar with modern motor scrapers, such as the Caterpillar® 657G with a capacity of 33.6 cubic metres, powered by a 564 horsepower diesel engine and able to travel fully loaded at 56 km/hr.

Nevertheless the Chesney's Patent Automatic Earth Scoop was a great innovation at the time as indicated in the following article from The West Australian on 1 May 1883:

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<sup>15</sup> Wellington Shire Council, *'History of the Port'*, [www.wellington.vic.gov.au](http://www.wellington.vic.gov.au), May 2008

The Melbourne Leader says: - A trial of a new automatic earth scoop, invented and patented by Mr. Charles Alfred Chesney, C.E., but manufactured by Mr. Hugh Lennon, agricultural implement maker, took place on Tuesday at Mr. M'Namara's farm, Moonee Ponds. Mr. Chesney's machine is one of the simplest of its kind yet constructed; the framework, which is all iron, is set upon three wheels, one in front and two behind. Between the latter is the seat for the driver, who works the lever, which lowers the scoop to be filled and raises it when full. The scoop itself is fixed on a pivot, and is so arranged that when it is required to empty it the driver has merely to touch a lever and the scoop turns completely over, resuming its original position after having got rid of its load. Its capacity by measurement is three quarters of a yard. The trial yesterday took place on a light sandy description of soil, which had been previously ploughed. A pair of strong farm horses were used, and performed their work with apparent ease, they being under the guidance of Mr. M'Namara, jun., who worked the scoop for the first time. Mr. Chesney and Mr. Lennon were present, and explained the details to the visitors, who were both numerous and influential, and who were unanimous in speaking in approving terms of the manner in which the scoop performed its work. Several speeches were afterwards made, and Mr. Chesney, in response to the toast wishing him success with his invention, quoted figures to show that five horse-power automatic earth scoops could be worked more cheaply and efficaciously than one steam power machine. He also expressed the gratification which he, as a native, felt at having produced a machine which was calculated to enable the settlers in the interior, whether squatters or selectors, to sink their tanks at a reasonable rate.

Whilst a photograph of Chesney's Patent Automatic Earth Scoop has not been found, what appears to be a very similar device is shown below. This was manufactured locally in South Australia in the 1920s and was described as a Tipping Scoop. It is said to be similar to

earlier scoops described as Buck Scoops of around 1910, but with the addition of wheels. The machine depicted has been converted to be drawn by a tractor.

Its operation is described as follows: “The physical operation involved digging the scoop into the earth, carrying it the distance required and pulling down on the handle to discharge the load”. This device was only intended for use with soft materials and had dimensions of 4.0 m x 1.2 m x 1.7 m and is said to have been used on construction of the Trans-Australia Railway line.



South Australian Tipping Scoop

At least one steam traction engine was used on the project<sup>16</sup> The traction engine was the precursor to the modern diesel tractor. It was not new technology in the 1870s. While the machine had been developed to drive farm machinery such as chaff cutters and saw benches it had also been adapted to ploughing agricultural land. Ploughing with traction engines was accomplished by hauling a plough between two traction engines positioned on either side of a paddock. The plough could be configured to cut in one direction or both directions. The use of traction engines in civil construction was a somewhat later innovation. It is a small step to replace the plough with a scoop for moving earth in a large shallow excavation. The use of a traction engine on the Sale Navigation Canal may have been extremely innovative but no details are known.

At the time of construction of the Port of Sale and the Sale Navigation Canal heavy steam-powered earth moving machinery was in its infancy. Daniel Elles invented the steam excavator (colloquially known as the steam shovel) in 1880 and marketed his first machine under the legendary Bucyrus trade name in 1882. Bucyrus still make heavy earth moving machinery today. The largest drag line excavator in the world is in use in a Queensland coal mine. It can move 168 m<sup>3</sup> at each bite. A machine of this size could have moved the total volume of material excavated from the Swinging Basin at the Port of Sale in about one day.

The construction of the Panama Canal (1880-1914) was co-incident with the construction of the Port of Sale and the Sale Navigation Canal. Steam shovels supplied by Bucyrus and another company, Marion, were used extensively in the construction of the Panama Canal.

<sup>16</sup> Wellington Shire Council, 'History of the Port', [www.wellington.vic.gov.au](http://www.wellington.vic.gov.au), May 2008

Despite the experience of the Panama Canal and the development of heavy earth moving machinery there is no evidence that such machinery had, at that time, reached Australia, or was employed on the Port of Sale and the Sale Navigation Canal.

#### Recent Adaptive Reuse

The recent redevelopment of the port by the Wellington Shire Council, to meet Sale's 21<sup>st</sup> century needs, is an excellent example of adaptive reuse of heritage infrastructure. Such redevelopment represents one of the most satisfactory outcomes for a heritage site. The Council is to be commended for its initiative.

#### **2.4 Research Potential:**

The history of the Port of Sale and the Sale Navigation Canal requires additional research in a number of areas. The construction of the works is not well documented. Furthermore the exact nature of the innovative construction techniques (as discussed in clause 2.3 above) requires a great deal of further research both in relation to this project and in relation to construction elsewhere in Australia at the same time.

The stories of individuals involved in the story of the Sale Swing Bridge have been well researched and provide a colourful picture of the times. The stories of the Bridgekeepers and of John Grainger are particularly compelling and paint strong pictures of achievement against the odds.

However stories of individuals involved in the story of the Port of Sale and the Sale Navigation Canal require more work. In particular the designer of the work has not been identified individually and there is nothing on those responsible for the construction or supervision of the works.

#### **2.5 Social:**

The Port of Sale and the Sale Navigation Canal impacted on almost all aspects of society in Sale and district and on the activities which depended on transport through and around the Port of Sale.

The Port of Sale and the Sale Navigation Canal were built, operated, maintained and used by locals. For much of its life it was the most important transport link in the Sale area.

The recent redevelopment of the Port of Sale writes a further chapter in the social influence of this site. The redeveloped port facility provides a useful community facility and enhances Sale's reputation as a leading tourist destination in the region.

#### **2.6 Rarity:**

Navigation canals are an uncommon feature of the Australian landscape. The general lack of navigation canals in Australia makes this one all the more important. Although the Sale Navigation Canal is only 5 km long it is the longest in Australia. Because of this rarity in Australia it is important that the Sale Navigation Canal be protected, conserved and interpreted with care.

The Port of Sale is not rare even in Australia. There are many coastal ports of similar magnitude and of all time frames.

#### **2.7 Representativeness:**

The Port of Sale and the Sale Navigation Canal is representative of civil works of large magnitude carried out for whatever purpose at the time of their construction. It is not the

actual construction which is of greatest interest to us now but rather the methods of construction used during the transition from manual labour to the use of mechanical equipment.

## **2.8 Integrity/Intactness:**

It seems that very little change has occurred in the basic structure of the Port of Sale and the Sale Navigation Canal during the 120 years since its construction. This is unusual and presents an opportunity to explore the archaeology of civil works of the era.

## **2.9 Statement of Significance:**

The author has developed the following Statement of Significance to reflect the broader significance of the work. This is the preferred Statement of Significance:

The Port of Sale and the Sale Navigation Canal provided an innovative solution to the problem of access to Sale. The Canal made it possible for steamers and small sailing ships to make optimum use of the natural waterways for moving people and goods. The Port of Sale was a key element in the trade and communications network linking Gippsland with Melbourne and Sydney from the 1880s to the early 1900s, contributing substantially to the growth and development of the region within a period of major expansion and development throughout the state.

The civil works occurred at a time of significant change in the execution of such works. The transition from manual labour to the use of machinery for major civil construction work is inferred in the construction of these works but requires further research.

The integrity of the works over such a long period is remarkable and provides many opportunities for archaeological investigation of the methods of construction used.

The works are still being used for much the same purpose as originally envisaged and the Port of Sale has recently been redeveloped to modern standards with a strong focus on the tourist industry in Sale. This is a classic example of sustainable use of old infrastructure.

The Port of Sale and the Sale Navigation Canal should be recognised, protected, conserved and recorded as a fine example of Victorian engineering in the 1880s.

The following Statements of Significance were also located during research of this paper:

### **1) National Trust of Australia (Victoria) Statement of Cultural Heritage Significance:**

CITATION The Sale Canal is an excavated channel approximately 2400 metres long and 30 metres wide providing a direct connection between Flooding Creek in the City of Sale to the lower reaches of the Thompson River. A section 370 metres long widens to a maximum of 90 metres, forming a swinging basin near Raymond Street. This area was known as the Port of Sale. Being on land "permanently reserved for canal purposes" (Gov. Gazette 10 Dec. 1886) the canal comes under the care and management of the City of Sale. The original purpose of the canal was to provide a navigable connection from Sale to the Gippsland Lakes for the movement of goods and passengers from the railhead at Sale. It was constructed in 1888 following a report to the Victorian Government by Sir John Coode and

despite the extension of the railway in 1888 it was used extensively by lake and coastal shipping up to the early 1900s. The canal is unique in Victoria as an example of the variety of works constructed to provide for movements to and from outlying areas of the State in a period of major expansion and development. It is now used mainly by pleasure craft from the Lakes. This, with some associated boat building activity at Sale, should ensure that the canal will be retained as a permanent feature with little risk of serious deterioration or interference.

## **2) Register of the National Estate Statement of Significance**

### **Statement of Significance:**

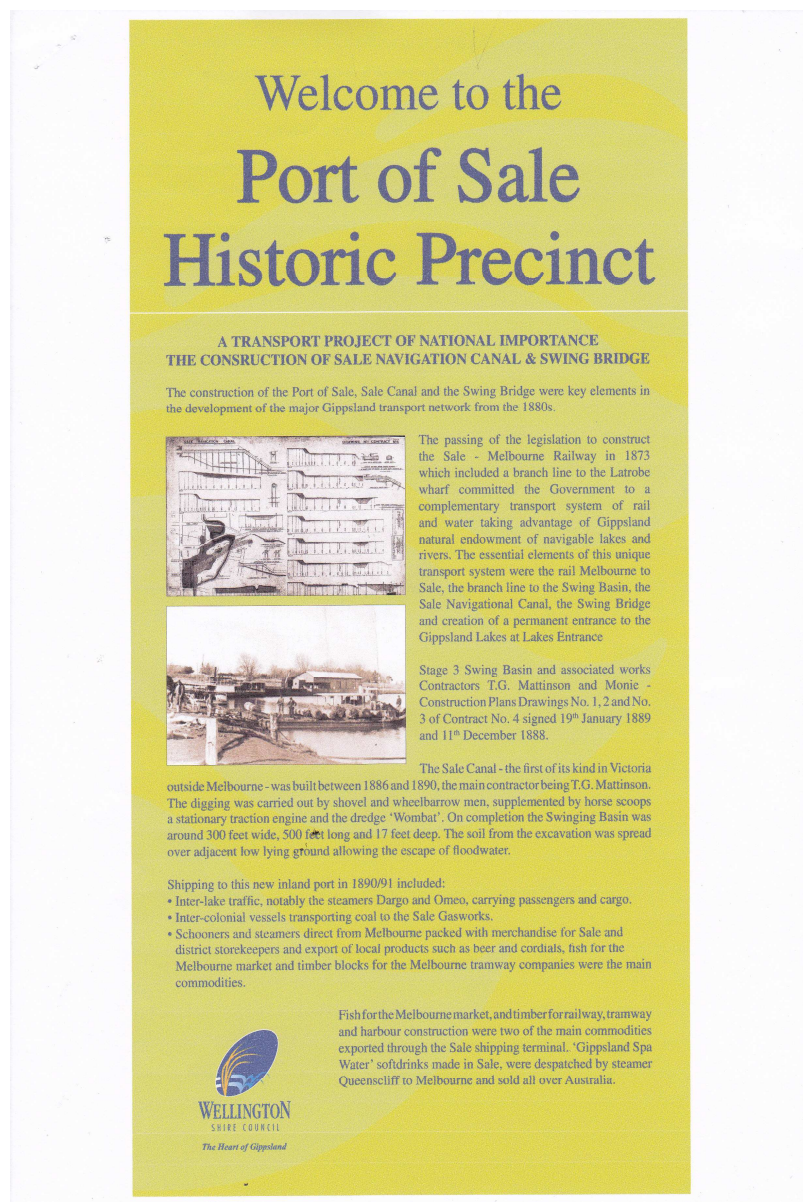
The Canal and its Swing Basin are an excellent example of an innovative solution to the problem of providing access to Sale. The Canal made it possible for steamers and small sailing ships to make optimum use of the natural waterways for moving people and goods (Criterion F.1). The Bridge was a key element in a trade and communications network linking Gippsland with Melbourne and Sydney from the 1880s to early 1900s, contributing substantially to the growth and development of the region within a period of major expansion and development throughout the State (Criterion A.4). The Bridge is important for its contribution to a form of transport no longer used in the region (Criterion B.2).

### **2.10 Area of Significance: Local**

### 3. Marking and Interpretation Plan

It is proposed that Engineers Australia mark the site as follows:

- Place a 300 mm diameter standard vitreous enamel-on-steel Engineering Heritage Marker, on an existing plinth currently displaying one plaque in the Port of Sale area between Canal Road and the Swinging Basin. This plinth is shown in the photograph in Appendix 3, page 31.
- In this particular case it would be appropriate to have the year of the EA marking included on the marker if possible.
- Wellington Shire Council is in the process of erecting the following interpretation panel adjacent to the marker site. Further interpretation panels, covering other subjects, are being erected along the River Heritage and wetlands Trail.



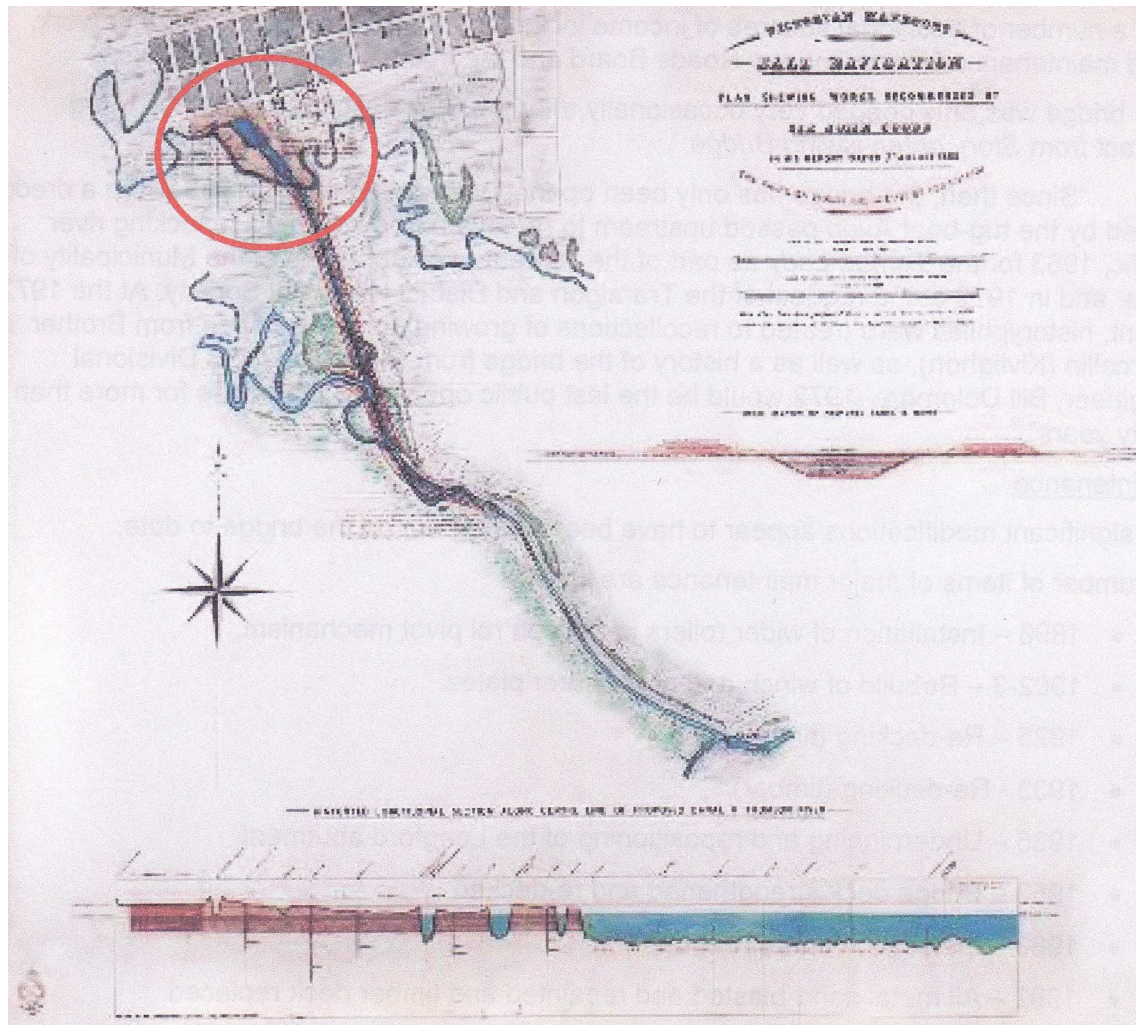
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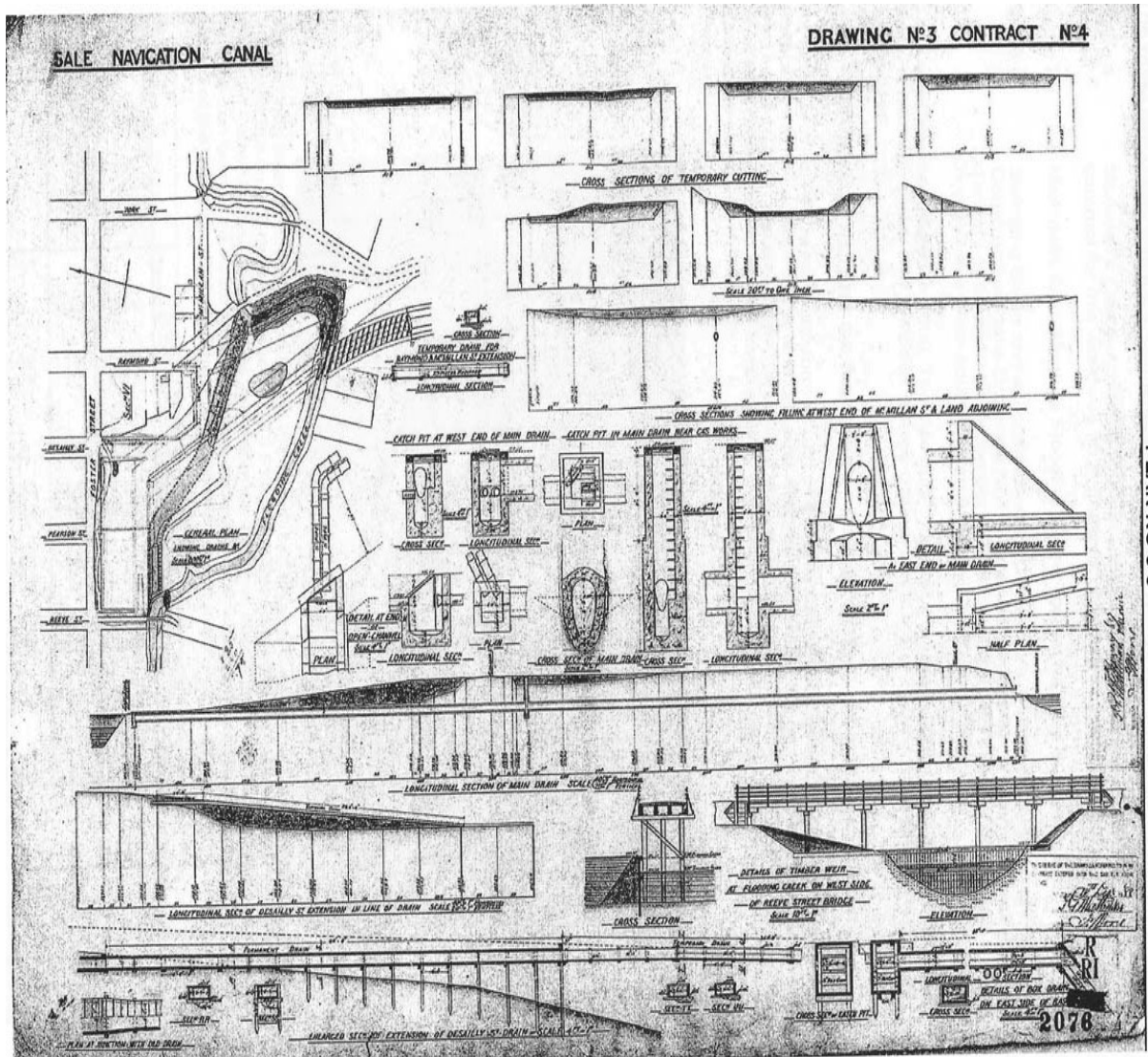
## Appendix 1

### Maps of Port of Sale and Sale Navigation Canal:



Historic tinted drawing of the Port of Sale (top with red ring around it) and the Sale Navigation Canal. The Swing Bridge is at the bottom right hand corner of the map. The re-adjustment of the course of the Thompson River is near the mid-point of the canal.

**Public Works Department drawing of construction details of the Port of Sale and the Sale Navigation Canal.**



Public Works Department drawing of construction details of the Port of Sale and the Sale Navigation Canal.

### Appendix 3

#### Images of Port of Sale and Sale Navigation Canal:



#### Swinging Basin at the Port of Sale 1940-1960.

© State Library of Victoria, Image No: rg009132, 1940-1960



#### Swinging Basin at the Port of Sale with the Sale Navigation Canal in the centre of the photograph 1940-1960.

© State Library of Victoria, Image No: jc014945



**Port of Sale after completion of the redevelopment completed in 2004.  
Commemorative plaque in foreground.**



**Port of Sale after completion of the redevelopment completed in 2004.**



**Port of Sale after completion of the redevelopment completed in 2004.**



**Sale Navigation Canal near its southern end near the Sale Swing Bridge.**

#### **Change Control**

VERSION 1	2 October 2009	1589 words
VERSION 2	6 October 2009	4710 words
VERSION 3	9 October 2009	5571 words
VERSION 4	16 October 2009	9258 words
VERSION 5	18 October 2009	9296 words
VERSION 6	9 November 2009	9803 words